Title (en)

NUCLEIC ACID BASED NANO-ROBOTIC SYSTEM

Title (de)

NANOROBOTISCHES SYSTEM AUF NUKLEINSÄUREBASIS

Title (fr)

SYSTEME NANOROBOTIQUE A BASE D'ACIDES NUCLEIQUES

Publication

EP 1687448 A4 20111130 (EN)

Application

EP 04809921 A 20041013

Priority

- US 2004033490 W 20041013
- US 51112003 P 20031015

Abstract (en)

[origin: WO2005040397A2] A multiped, capable of traveling in more than one direction along a molecular path in a nano-robotic system where the steps taken by the feet of the multiped are controlled in a sequence specific fashion, is presented. The feet of the multiped dock to footholds on the molecular path via cohesion with "set" molecules and are released from the footholds through the introduction of "unset" molecules that detach or strip away the "set" molecules.

IPC 8 full level

C12Q 1/68 (2006.01); **B65G 1/00** (2006.01); **B82B 1/00** (2006.01); **B82Y 30/00** (2011.01); **C12M 1/34** (2006.01); **F03G 7/00** (2006.01); **G01N 15/06** (2006.01)

IPC 8 main group level

C12Q (2006.01)

CPC (source: EP US)

B25J 11/00 (2013.01 - US); **B82Y 30/00** (2013.01 - EP US); **C12Q 1/6806** (2013.01 - US)

Citation (search report)

- [A] FRIEDRICH C. SIMMEL: "DNA molecular motors", PROCEEDINGS OF SPIE, vol. 4332, 1 January 2001 (2001-01-01), pages 419 - 428, XP055010210, ISSN: 0277-786X, DOI: 10.1117/12.429683
- [A] NIEMEYER C M ET AL: "NANOMECHANICAL DEVICES BASED ON DNA", ANGEWANDTE CHEMIE. INTERNATIONAL EDITION, WILEY VCH VERLAG, WEINHEIM, vol. 41, no. 20, 18 October 2002 (2002-10-18), pages 3779 - 3783, XP001197701, ISSN: 1433-7851, DOI: 10.1002/1521-3773(20021018)41:20<3779::AID-ANIE3779>3.0.CO;2-F

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2005040397 A2 20050506; **WO 2005040397 A3 20060601**; EP 1687448 A2 20060809; EP 1687448 A4 20111130; EP 1687448 B1 20141217; US 2005136453 A1 20050623; US 7163794 B2 20070116

DOCDB simple family (application)

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